

OUTLOOK 2020



New Decade, New Directions

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Our business centers on Software, IT Infrastructure, and Internet & Digital Media. Since inception, Union Square Advisors has advised on over 110 transactions, valued in excess of \$100 billion.

OVERVIEW

Software

Enterprise Digital Transformation

Digitization of enterprise workflows and increasing cloud adoption within the enterprise

Big Data and Advanced Analytics

Data explosion continues to accelerate, augmented by next-gen analytics including AI and machine learning

Morphing Security Landscape

New paradigms around threat detection, protection, mitigation and remediation

IT Infrastructure

Converged Solutions Reach Critical Mass

Scalable systems that fit the needs of next-gen applications and data centers

NPM/APM, Visibility, and now ITOA

Once distinct silos are converging as visibility becomes increasingly important

IT-as-a-Service Disrupts Layer 4 - 7

IT stack is increasingly becoming software-based

Internet & Digital Media

AdTech Meets MarTech

Enterprise players are building comprehensive solutions via strategic acquisitions

Mobile-First Approach

Strong monetization and user engagement across multiple key domains

Vertical Marketplace Models

Network effects crucial to adoption/long-term success

WELCOME



Carter McClelland
Co-Founder and Chairman



Ted Smith
Co-Founder and President

New Decade, New Directions ***Now is the time to recalibrate and forge ahead***

There is an old saying that goes “May you live in interesting times.” Some people consider it a curse, while others welcome it as an expression of encouragement. It is a bit of a head scratcher as well, because who would want to live in un-interesting times? Above all, it sets the stage for 2020 perfectly.

To begin with, the backdrop to 2020 will be one of heated political rhetoric. The ongoing trade war with China, increased tensions in other parts of Asia and the Middle East, the impact of a now-certain Brexit, the impeachment proceedings, and threats from various presidential candidates to more heavily regulate or break up big tech will fill the air with uncertainty. Much of this is spillover from 2019, but rather than diminishing over time, the noise level around these factors has intensified. That certainly makes the times more interesting – but, absent a major geopolitical event, not enough to derail the markets as we see them today.

Aside from the election year dynamics, there remains an enormous amount of capital available across the technology landscape, and strong pressure to deploy it. This has been the case for some time; however, in many instances, the sky-high valuations that arise from these conditions have become out-of-synch with company performance. Investors seem to have had their fill with this phenomenon, and their appetite for risk is shifting. They are less willing to rush into investment opportunities with companies that don’t have a rational path to profitability.

This is certainly the case for tech IPOs, which have declined in number but soared in valuation. Not that long ago, it was normal for companies to go public with valuations well below \$1 billion; in 2019, however, 60% of the technology firms that went public did so at a market value north of that level. Massive pools of capital are now available for additional rounds of private funding, elongating the path to IPO and enabling companies to stay private longer while they strive for unicorn status. The net result is fewer tech IPOs, and an increased focus on exits via M&A.

With technology valuation multiples at or near all-time highs, and with both investor and acquiror sentiment now shifting to favor companies that showcase both strong growth AND a rational path to profitability, we believe the market may be approaching an inflection point. How will that affect the pace of M&A activity,

Caution is the watchword for many tech investors in 2020. But rather than recoil, tech companies should understand their options and make the most of them.

which has ballooned from \$144B in 2009 to \$430B in 2019?¹ Does this foreshadow widespread repricing in the year ahead? Time will tell. But even a slight correction in valuations will be a catalyst for more transactions, as desirable properties become (relatively) cheaper. In the meantime, to be clear, deals still will get done in an expensive market.

From a capital deployment standpoint, we believe opportunities to generate significant returns remain abundant. That said, some technology investors are taking a more cautious and selective approach in the current environment. Fair enough. But rather than completely recoiling, we believe now is the time to recalibrate and forge ahead. Why? Because beyond the high level of overall returns still afforded by investing in technology, capital structures for tech companies are evolving – as they should – and making these companies more efficient consumers of capital.

Although growth and innovation still abound in tech, the overall sector is no longer an upstart; it is maturing, and the expanding capital structure options available to technology companies reflect that maturation. Having been driven for years largely by an “Equity Only” mentality, capital raising alternatives now exist that allow for reduced dilution and a lower overall cost of capital. As a result, mid- to late-stage tech companies should explore the range of debt and equity options that will enable them to optimize their capital structures, achieve key milestones and secure a favorable exit.

This evolution is why we established our new [Capital Structure Advisory practice](#) to complement our existing M&A and capital raising advisory services. The market is catching up to the reality that technology companies are capable of utilizing a broader range of capital structures, and we have the expertise to design the best strategies for both consumers and deployers of capital.

Our goal is to be your advisor of choice, delivering independent and conflict-free advice of the highest quality and integrity. In that spirit, we offer this annual outlook, which provides our perspectives on key topics to watch during the year ahead. We welcome the opportunity to have a deeper conversation on any of them that spark your interest.

One thing is for sure, the best way to navigate interesting times is with a friend.



Carter McClelland
Co-Founder & Chairman



Ted Smith
Co-Founder & President

TECHNOLOGY M&A



Wayne Kawarabayashi (left)
Partner and Head of Mergers & Acquisitions

Devon Ritch (center)
Managing Director

Phil Kim (right)
Managing Director

Ready for Anything

Deal-Making still abound, but caution is making a comeback

“Ready for anything.” As we begin 2020, those three words could be seen as a question, a warning or an affirmation depending on your capacity and how the markets behave. Such is the state of play during these uncertain times.

The impact of the U.S./China trade war, the looming U.S. presidential elections, the potential for a hard Brexit, Hong Kong protests, pockets of geo-political unrest, and concerns over a slowing global economy are causing a slowdown in M&A that may well carry over into the New Year. And if it comes to pass, then corporates, private equity buyers, VC and financial investors may grow more cautious as they pursue M&A and investment opportunities. At the same time, private and public companies may feel pressure to proactively pursue a partial or full exit.

The most recent data reflects the mixed realities of the marketplace. Global Tech M&A volume in 2019 was

\$430B, which is down 18% versus the prior year. A 20% drop in deals greater than \$1B drove the decline. Nevertheless, deals between \$500M and \$1B were up 8% during the same period.¹

Buyers Still Buying to Protect or Extend their Turf

Financial technology dominated M&A this year with LSE/Refinitiv (\$27B), Global Payments/TSYS (\$21B), FIS/Worldpay (\$35.5B) and Fiserv/First Data (\$22B) each showcasing transactions in which gaining meaningful additional scale was important. The largest application and infrastructure software deals were done by buyers who purchased sizeable companies including Salesforce/Tableau (\$15.1B) and Broadcom/Symantec (\$10.7B).

In the internet arena, there were a number of larger deals, including Takeaway.com/Just Eat (\$6.3B), Viagogo/StubHub (\$4B), and PayPal/Honey (\$4B). In healthcare IT, we saw Dassault Systèmes/Medidata (\$5.8B). Financial sponsors remained active with H&F/Ultimate Software (\$11B), EQT & Digital Colony/Zayo (\$8.2B), Apollo/Tech Data (\$5.6B), Thoma Bravo/Sophos (\$3.8b), Thoma Bravo/Ellie Mae (\$3.7B), BC Partners/Presidio (\$2.1B) and Apollo/Shutterfly (\$1.7B).

Mega Trends for 2020

Even if there is some pullback this year, we believe investments and acquisitions in tech will continue to improve and deliver more cost-effective solutions for corporations and their customers. During the 2008 market meltdown, the tech sector weathered the storm fairly well and was one of the industries to rebound quickly because tech permeates every industry sector. According to Gartner, global IT spending is expected to grow by 0.4% to \$3.7 trillion in 2020. In the near term, we anticipate investment and M&A will trend toward the following:

- 1 Cloud applications and infrastructure** will further proliferate as companies continue to migrate their offerings to the cloud at a rapid pace, gaining comfort with the ubiquity of applications, security and cost-effectiveness afforded by cloud infrastructure. According to IDC, worldwide public cloud services spending will grow from \$229B in 2019 to nearly \$500B in 2023.²
- 2 Digital transformation and robotic process automation (RPA)** to drive workflow efficiencies and cost savings will be critical areas of investment, particularly if the economy declines. Deloitte's research shows that 53% of organizations have already started their RPA journeys. By 2020, that number is expected to grow to 72% and by 2022, Deloitte expects "near-universal adoption."³
- 3 AI/ML** to more effectively leverage big data and machine data to deliver greater insights and efficiencies for companies and their customers. Gartner predicts the business value created by AI will reach \$3.9T in 2022.⁴
- 4 MarTech and customer experience.** Despite the battle to protect privacy and personal data, advertising and marketing technologies that collect data from consumers' search histories, personal health and fitness information, mobile app usage, and online and offline purchase behaviors will continue to deliver better products, services and experiences that customers can't live without. Martech is now a \$121.5B market worldwide⁵ and the global customer experience management market is anticipated to surge from \$6B today to nearly \$24B by 2026.⁶

Cross-industry deals such as McDonald's \$300M machine learning/personalization acquisition of Dynamic Yield continue to support the movement by non-traditional tech buyers to add more software and analytics capabilities to their arsenals – a trend we think will accelerate going forward.

While activist campaign activity is lower than last year, hedge funds continued to press for return of capital, restructurings or M&A including Elliott agitating for reform with AT&T, SAP, LogMein, and Symantec, Third Point with Sony and Neuberger Berman with Verint.

Limping IPO Unicorns vs Private Market Financing

In 2019, tech IPOs increased significantly in dollar volume, raising \$31.2B versus last year's \$19.9B while the number of IPOs increased from 38 to 43. However, several of the larger deals have sputtered including Lyft and Uber, which closed flat and down 8%, respectively, on the first day of trading and are down from their IPO pricing by 40% to 34%, respectively. The second largest IPO of the year was expected to be WeWork; but the company pulled its IPO, ousted its CEO, and now is struggling to survive.

At the same time, other, "smaller" IPOs have thrived including Zoom Video, CrowdStrike, Medallia, Dynatrace, Datadog, Ping, and Bill.com, which closed up between 29% to 99% on the first day of trading and YTD through December are still up between 40% to 89%. Likewise, private placement activity marked its third consecutive year of growth. In 2019, private financing volume was up 19%



TECHNOLOGY M&A

trying to do the same, and so the demand/supply appears to be shifting in favor of a buyers' market.

What does this mean for tech companies? Investors and corporate boards should continue to proactively assess their options and plan for a rainy day. Companies in need of capital should embark on the process earlier and raise enough to have extra reserves. Companies looking to exit should evaluate the cost benefit of selling now because, if they choose to wait, they may have to hunker down for a longer period – especially if valuation multiples reset in response to a market slowdown.

Large corporations should also carefully assess their strategic needs, divesting/spinning underperforming assets and carefully scrutinizing which tactical and large acquisitions they will undertake without “betting the farm.”

Private equity will continue to deploy their large war chests to search for tech leaders, underperforming assets, tuck-in opportunities, and carve-outs. At the same time, they will look to their own portfolios to try to take some chips off the table by selling entire companies or partial stakes, or by recapitalizing or refinancing these assets.

Sources:

- (1) Data extracted from 451 Research Group
- (2) IDC: Worldwide Semiannual Public Cloud Services Spending Guide, July 2019
- (3) Deloitte: The robots are ready. Are you?
- (4) Gartner: The Business Value of Artificial Intelligence, Worldwide, 2017-2025.
- (5) BDO: Martech-2020 and beyond
- (6) Fortune Business Insights: Customer Experience Management Market

with \$77.9B of volume vs. the prior year at \$65.4B. Vehicle and ride sharing related technologies, AI, robotic process automation, real estate and financial software, online food delivery, ecommerce, and security companies seemed to garner much of the investment dollars. Some notable capital raises included Cruise (self-driving cars) for \$1.5B, OneWeb (satellites) for \$1.2B, and OpenAI (artificial intelligence) for \$1B; numerous other private companies raised \$100MM or more in their most recent rounds.

The Road Ahead

While there continues to be an abundance of cash in the hands of corporate, private equity, venture capital and public investors, a more cautious sentiment towards buying and investing began to develop in 2019. Despite continued record highs in some of the equity market indices, corporate earnings are starting to show mixed results as overall GDP growth has slowed. As a result, companies that are looking to fundraise or fully exit are finding that many of their peers are

IT INFRASTRUCTURE



Jace Kowalzyk (left)
Head of IT Infrastructure

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2020 – The Year 5G Gets Real *Greater bandwidth will bring new capabilities to the cloud and the edge*

After years of waiting (and a few not-so-subtle marketing campaigns), 2020 is poised to usher in a host of new 5G networks, devices, and capabilities. This great leap forward in mobile technology will no doubt transform how we live, work, and play. However, that promise comes with an important one-word disclaimer: “Eventually.”

In order for 5G to fulfill its potential, it must first reach critical mass in terms of coverage and adoption. That’s still a way off. Sure, rollouts have started; but they

are confined to a limited number of large cities and only small coverage areas are currently in use within those beta locations. Furthermore, these early deployments tend to focus more on broadband and internet replacement than mobile. At the moment, there are only a dozen or so [5G-enabled phones](#) on the market from which to choose.

Nevertheless, 5G fever is real and people are eager for a cure. Consumers have an unquenchable thirst for data – be it streaming movies on the go, sharing video snippets via Marco Polo, Tik Tok, and Instagram or sending literally billions of text messages per day. 5G will unlock significant bandwidth to catch up with this demand – and will create the platform to enable the creation and delivery of next-generation mobile applications that will be even more data-hungry.

In the enterprise space, 5G looms even larger. Here, the primary focus is on tectonic shifts in real-time processing that will enable highly complex capabilities, such as autonomous vehicles (cars, trucks, drones, etc.). On top of that, imagine billions of connected devices recording, capturing, sharing and transferring data in fractions of seconds. The number of use cases is mindboggling and will enhance operations across nearly every industry.

Within a few years we can expect a far more dynamic and connected world. Virtually everything we interact with will be “smart” – from home appliances to city streets to agricultural equipment and beyond.

The arrival of 5G means anything that can be connected, will be connected. No wonder 76% of S&P executives believe 5G will have a significant impact on their industry, more than any other.¹

New Battlegrounds at the Edge

5G networks will enable greater proliferation of computing at the edge. This means that within a few years we can expect a far more dynamic and connected world. Virtually everything we interact with will be “smart” – from home appliances to city streets to agricultural equipment and beyond. Connected “smart crosswalks” will automatically light up at night to deter cars from encroaching on a passing pedestrian. Connected “Smart farms” will be able to detect when crops need water and fertilizer for optimal yields and apply pesticides only where needed.

The technologies underpinning the emergent Internet of Things stand to benefit greatly. And so, every technology company, from chipmakers to software providers, will look to stake their claim.

The Cloud Wars Continue

As has been discussed in our previous [Outlook reports](#), enterprise infrastructure is undergoing a massive change attributable to cloud computing. Cloud-based network, compute and storage technologies are driving advancements in applications, infrastructure and overall workloads. The arrival of 5G networks will only accelerate the pace of innovation. Therefore, we

expect 2020 will be another big year in terms of investment and M&A dollars being funneled towards the cloud, building on 2019’s momentum.

This trend will affect every part of the stack – from applications to infrastructure. Salesforce’s acquisition of Tableau for nearly \$16B and IBM’s acquisition of RedHat for \$34B make clear that the cloud leaders are lining up for an elongated battle for enterprise IT budgets. And the battlefield is getting bigger. Emerging technologies such as AI, ML, and blockchain are gaining enterprise credibility, which means we are in for a long series of hybrid IT innovations and investment opportunities. In addition, we expect to see continued strategic activity in increasingly important sub-segments, including cloud migration, optimization and automation, multi-cloud solutions, data migration and management, and visibility pertaining to all elements of the hybrid IT stack – spanning networks and applications.

All told, 2020 is certain to be a very exciting year for enterprise IT. Competition among carriers, device manufacturers, and cloud vendors will intensify as they seek to capture their share of new markets made possible by 5G.

Source:

(1) Accenture Technology Vision 2019 Survey

INTERNET & DIGITAL MEDIA



Paul Inouye (left)
Partner, Head of Internet and Digital Media

Todd Holman (right)
Director

The Value of Visibility

Advances in artificial intelligence and machine learning help build relationships and drive sales

In November 1969, the first real internet connection was established between UCLA and the Stanford Research Institute. The link was made on the U.S. Defense Department's Advanced Research Projects Agency Network (ARPANET), which was the forerunner of today's World Wide Web. The first text message sent through it was just one word long and it crashed the system.

Fifty years later, there are 4.5 billion internet users sending 294 billion emails every day. And that's just the tip of the iceberg. Many billions more interactions occur by the hour through social media, search engines, and connected devices.

While marketers have been capitalizing on all this connectivity, mostly by tracking anonymized internet activity, new advances in AI and ML are improving their ability to attribute online behavior to individuals. For instance, roughly 76% of American adults engage in "second-screening" — watching TV while also using a connected device such as a laptop or

smartphone. With a deeper understanding of this habit, marketers can deliver the right message at the right time using the right channel. They can even fine-tune the look and feel of their creative content by layering user-level data with target messaging. This practice, known as dynamic creative optimization, ensures that dog lovers see puppies in certain ads while cat people see kittens.

AdTech companies like BounceX and TVSquared are at the forefront of this technology, which leverages first-party data that connects device IDs to email addresses in order to enhance subsequent interactions. Brands that adopt such capabilities can develop ever more personalized advertising, emails, and website experiences that strengthen relationships and drive sales.

Computer vision is another emerging, ML-driven technology, one that strives to understand the content of digital images. When applied to media environments, computer vision goes beyond mere image recognition; it can evaluate and interpret text and video content in real time. That's a powerful new tool for many verticals. Marketers in particular can use computer vision to "read" and interpret the content of a website and compare that to

Over The Top Undercuts the Establishment

79% of households still pay for traditional cable or satellite service; however, cord-cutting rates are accelerating in the U.S. Total pay-TV subscribers declined 3.4% in 2017, and “cord-never” households that did not pay for any traditional form of TV service in the first place are at 13.5 million and growing.

Source: comScore, MoffettNathanson, A.T. Kearney

established brand criteria. This helps them determine the best places to run ads. For instance, candy companies that advertise on CNN.com would generally prefer not to appear alongside a photo essay about childhood obesity. With analysis provided by computer vision, brands can avoid such unwanted placements and optimize their programmatic advertising spend.

Leaders in this space, such as GumGum, are helping redefine what’s possible for brand managers because a computer that can see and “think” for itself is far more powerful than one that relies on tag words to interpret the world. Armed with computer vision, brands can better measure ad effectiveness, enable new online “scan-and-purchase” scenarios, deliver hyper-personalized video, track competitors, and even pinpoint copyright infringements.

One of the biggest disrupters in the digital landscape is the rise of over-the-top (OTT) streaming media services, which are available directly to viewers via the Internet. The traditional intermediaries that controlled content distribution (cable, broadcast, and satellite platforms) are being left behind as consumers flock to subscription

INTERNET & DIGITAL MEDIA

services. According to eMarketer, there are more than 182 million OTT subscribers in the United States – more than half of the population.

Established players like Netflix, YouTube, and Amazon Prime Video have caused the biggest waves. And because they have such large followings, they are exploring hybrid monetization models in order to maximize revenue. YouTube has supplemented its mainstay advertising-supported video on demand (AVOD) model with a variety of transactional video on demand (TVOD) options. It has tinkered with pricing ever since.

High demand for originality and exclusivity on OTT platforms is driving some retrenching of content. Most notably, Disney removed its content from competitive platforms to create Disney+.

For newer OTT services, like Philo or fuboTV, the future will be mobile. Mobile is surpassing TV as the primary consumption channel, though the type of content consumed may differ on mobile vs. traditional TV screens. The expansion of 5G networks will only accelerate this transformation as it further reduces latency and increases bandwidth available on mobile.

With all this in mind, what will the digital media landscape look like in 2020? Three things are certain: more devices, more demand, and more data. Against that backdrop, companies that can provide accurate and actionable insights on content and user behavior will be highly sought after. Knowing who is online is only half the battle. Winning will depend on seeing what they see.

SOFTWARE



Ted Smith (left)
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Vice President

The Power of Convergence *Integrated software solutions offer more than the sum of their parts*

Innovation + collaboration = transformation. Most major shifts in the marketplace tend to follow this (deceptively simple) winning formula. Consider the iPhone. A clever design paired with a thriving ecosystem of forward-thinking third parties redefined the mobile landscape. Same goes for ride sharing, travel fare aggregators, financial services, and many other brainchildren that have reshaped industries.

The lynchpin for each of these success stories is a proprietary platform that creates incremental value beyond the sum of its individual products, and in so doing enables new possibilities. The downside, however, is that the data “exhaust” these platforms generate isn’t always shared or understood widely.

The Role of Customer Data within Enterprise Software Platforms

Most large companies use dozens of software tools to help them create and manage information across disciplines.

However, those tools don’t integrate smoothly, which results in silos of information – or worse, inconsistent information. At the same time, next-generation applications have the ability to collect an increasing volume and variety of customer-centric data. The combined result is dislocated decision-making and resource management, which can lead to sub-optimized customer interactions as well as significant compliance and risk issues.

Exacerbating these issues are new forms of structured and unstructured customer data that are continuously being collected. But advances in AI have enabled the rise of Voice of the Customer platforms like InMoment (acquired by Madison Dearborn Partners), Qualtrics (acquired by SAP) and Medallia (a 2019 IPO success story) that provide capabilities to help brands overcome their data challenges to collect, integrate, understand and share customer feedback from every meaningful touchpoint. Other Customer Experience leaders, like UserTesting, help brands leverage hyper-focused panels to capture unique, highly detailed insights from customers, partners, employees and other stakeholders. Armed with these insights, companies can mobilize to exceed

85% of S&P executives agree the integration of customization and real time delivery is their next big wave of competitive advantage.

customer expectations, enhance partnerships and make improvements to product lines and overall operations.

The arrival of powerful customer data platforms (CDPs) also has helped address the negative impacts of siloed data within enterprises. The idea is simple: intelligently capture and integrate customer information from every touch point, and make it available across the organization so that companies can deliver more personalized experiences. Salesforce is making a big push in this space with its Customer 360 Truth services, which enhance data and identity management across Salesforce and other applications; this provides enterprises with instant access to consistent, reconciled customer data as a “single source of truth.”¹ Numerous other CDP solution vendors have developed solutions with a similar vision in mind.

The timing of these developments is opportune. According to the 2019 Accenture Technology Vision Survey, 85% of S&P executives say that the customization and real-time delivery of solutions for consumers is their next big wave of competitive advantage. Accordingly, we expect to see a surge of interest in data platform companies that allow enterprises to leverage end-to-end data in ways that guide

strategic decision-making and enable the delivery of enhanced customer solutions, while also ensuring compliance with strengthening data protection and privacy requirements.

Systems of Record and the Value of Workflow

Another timely indicator of the power of convergence is the trend among data and document management companies to expand beyond their core functionality and into adjacent workflows.

DocuSign, for example, achieved market leadership through its expertise with e-signatures; now its sights are set on “modernizing the world's Systems of Agreement.” This is more than mere marketing. Leveraging its acquisition of SpringCM, DocuSign has developed a suite of product innovations that expand the company's platform with data capture, analytics and workflow tools to manage an organization's entire contracting process. These new capabilities also harness machine learning and natural language processing to help parties scan and interpret agreement clauses (e.g., knowing that a contract clause about Internet cookies is about data privacy, even when the word “privacy” is absent).²

Likewise, traditional cloud storage companies, like Dropbox, now offer

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collaboration and workflow services. Some of these new capabilities are native, like Dropbox Spaces, while others are made possible through recently released APIs that connect to popular sites like Slack, Zoom, and Trello. These enhancements elevate Dropbox from a straightforward file management solution to a multi-faceted “digital work hub.”³ Such a transformation legitimately increases value to end-users and, at the same time, it lays the groundwork for relationships with other cloud platforms and developers who can facilitate future growth.

AI Accelerates Digital Transformation

Digital transformation of the enterprise is a theme that we have keenly followed over the last several years. While it is not a “new” trend, there are always new dimensions to explore because of the continuous innovation in the technology stack, and its impact on business processes. The significance of these innovations is reflected in the findings of a recent report by Boston Consulting Group and the MIT Sloan Management Review, which revealed that executives of the world’s leading enterprises now view the impact of AI not just in business opportunity terms, but as a strategic imperative with deep implications on their competitive positioning.

A key driver of AI adoption for IT organizations is the need to understand, manage, and control pricing of cloud-based resources amid a growing perception that moving from on-premise infrastructure to the cloud is turning out to be more expensive than previously promised. Companies like DataDog, MoogSoft, ScienceLogic, and

Spotinst are using AI to efficiently operationalize and automate IT (“AIOps”) as they continue to broaden their portfolio of offerings for Enterprise IT use cases. Another category of AI-enablers that we are excited about include H2O.AI, Noodle.AI, and SparkCognition – all of which offer enterprise-focused ML-platforms that help organizations develop AI applications for industry- and business-specific use cases.

We expect investment activity in AI technologies to remain strong, judging by the record-setting exit activity in 2019. Large strategic players have made significant investments in developing AI-driven solutions in-house, while also spending large sums to acquire leading-/bleeding-edge AI technologies. Given several recent announcements (and some on the horizon), we see strategic M&A in 2020 and beyond as a path by which AI technologies initially developed for national security purposes go on to much greater prevalence (and profitability) via their incorporation into mass-market consumer hardware and software.

Sources:

- (1) Salesforce.com
- (2) DocuSign System of Agreement
<https://www.docusign.com/press-releases/docusign-unveils-system-of-agreement-vision-at-momentum-2018>
- (3) Dropbox
<https://blog.dropbox.com/topics/product-tips/new-desktop-app>

CAPITAL MARKETS



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Make Sure Your Capital Structure is Right for the Times

Avoid equity risk by re-examining your debt stack

In his 1962 State of the Union address, President John F. Kennedy observed: “The time to repair the roof is when the sun is shining.” He was speaking of the economy, of course, which had

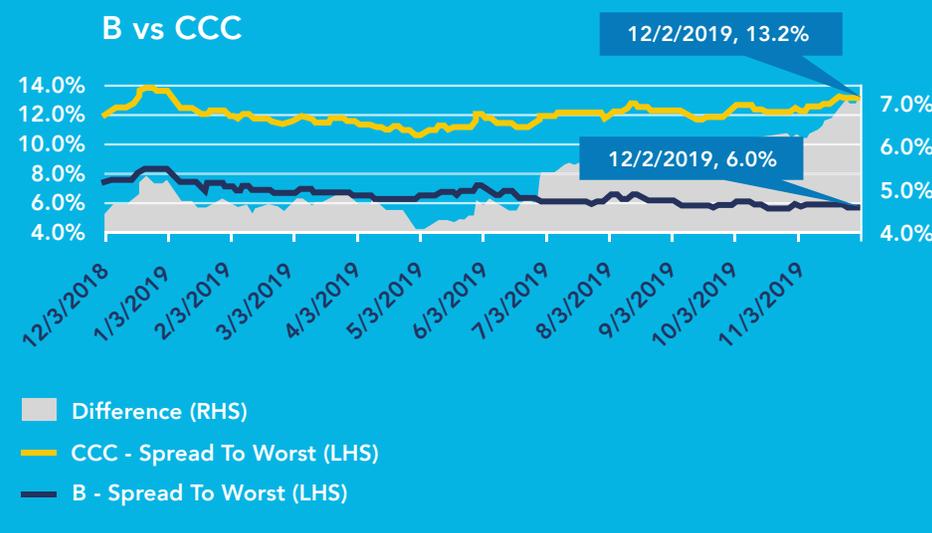
expanded significantly throughout the 1950s; and his intent was to promote anti-recessionary policies. At the time, the stock market already had begun to slide; and over the following six months it declined nearly 23%.

No one is predicting a similar fate in 2020, thank goodness. Nevertheless, President Kennedy’s advice is as sound today as it ever was. As we enter the 11th consecutive year of economic growth, every business should take steps to put their financial house in order – especially technology companies with access to debt.

These days, there is a case building to reconsider valuations and incumbent metrics to underwrite risk. It’s hardly surprising in the wake of plummeting values of well-known unicorns like Uber, WeWork, and Juul. With that in mind, issuers should re-examine their own financial status as it relates to their overall capital structure and debt financing needs.

While leverage has been freely available over the past decade – driven by an unnaturally low interest rate environment and the tsunami of private credit funds flooding the market with liquidity – the potential for recession is on the mind of every investor. Should it come to pass, the expectation is that risk

Bifurcation of higher and lower-quality credits expanded in 2019



Source: Bank of America Merrill Lynch

Three Triggers for Equity Risk

1 Cash Burn. Should liquidity usage accelerate faster than projected and the market has renewed views on valuation and prospects, the ability to refinance with the incumbent or with a new partner could prove challenging.

2 Covenant Breach. If the covenants were set too tight initially or there was some underperformance, negotiating a breach in a more cautionary atmosphere creates equity risk.

3 Looming Maturity. Should valuation expectations compress relative to debt levels, refinancing or extending could be unduly penalizing.

would be reset and repriced. In fact, 2019 showed signs of repricing and a bias towards higher quality credits. Double-B and even single-B rated bonds have massively outperformed CCC bonds throughout the year (single B returning +6.69% vs CCC at -3.27%).¹

The start of a new year is the likely time for investment committees to reevaluate their existing portfolio risk and new investments. Previously accepted risk attributes may change, and topline growth expectations may be replaced with a demand for faster paths to profitability. Where investment sizes were larger against aggressive business models, defensive postures and smaller commitments may be the new investment path. And while the markets may still be awash with cash yearning to be invested, the aperture of capital deployment may narrow.

Imagine if your lender altered the way they make capital available and under

what terms. What if their assessment of risk as it relates to your business, prospects/growth, valuation or industry (or all of the above) suddenly changed? Would you know if those new underpinnings create hazards to your business going forward? How would you respond?

There are three main catalysts that could trigger an unpleasant (to say the least) negotiation with your existing lender: cash burn, covenant breach, and looming maturity. Taking a proactive approach to assessing your current capital structure, potential debt needs, and overall flexibility requirements is the best maneuver to avoid these three events. By the same token, companies in search of modest amounts of growth capital (\$10-20MM) should ensure they have a solid structure in place in order to secure funding on favorable terms and avoid having to give away more ownership than absolutely necessary.

We can only guess what conditions the markets will bring in 2020, and how lenders will respond. However, we can be certain that those companies that are keenly aware of their capital needs, and that are honest about business risks relating to liquidity, potential covenant missteps or nearer-term maturities, will navigate uncertainty as if they had known what was coming all along.

Sources:

(1) J.P. Morgan Research, December 3, 2019

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